

REMARKS

Claims 1-27 remain in this application. Claims 15-27 have been withdrawn by the Examiner as a result of an election made by Applicants in response to a restriction requirement. Claims 1, 6, 7, 12 and 14 have been amended.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with Markings to Show Changes Made.**"

The Examiner's indication of allowability of claims 7-9, if rewritten to include the base claim and intervening claims, is acknowledged and appreciated.

Claims 1-6 and 10-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thiebeault et al. in view of Hayafuji et al. Applicants respectfully traverse this rejection because the cited references, alone or in combination, do not disclose or suggest the light-emitting region of the semiconductor light-emitting devices being at a slant angle relative to the lower end surface of the light-emitting device, as described in claim 1.

More specifically, the present invention is directed to a display system including a plurality of semiconductor light-emitting devices that are embedded in an insulation layer. Each of the semiconductor light-emitting devices has a lower end surface and an exposed upper end portion. A light-emitting region is provided between the lower end surface and the upper end portion and is at a slant angle relative to the lower end surface of the light-emitting device.

In reference to claim 7-9, the Office Action states that while prior art shows providing "a triangular shaped structure but it is not believed to be obvious to combine this reference with those quoted above." In view of this statement, claim 1 is now believed to be allowable, since it recites a light-emitting region which is at a slant angle, as in a "triangular shaped structure," for example. Claims 2-14 depend from claim 1 and are also believed allowable for the same reason and because of the additional features described in these claims.

In light of the above, claims 1-14 are now in condition for allowance, which is respectfully requested.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY

A handwritten signature in black ink, appearing to read "B. Joe Kim", written over a horizontal line.

B. Joe Kim

Reg. No. 41,895

P.O. Box 1135

Chicago, Illinois 60690-1135

Phone: (312) 807-4354

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

The paragraph beginning on page 13, line 3 has been amended as follows:

The semiconductor light-emitting device is not particularly limited as to the method of producing the same, constitution of materials or crystal structure, as far as the conductor film is formed on an upper end portion thereof exposed by thinning the insulation layer covering it and the upper end portion electrode is led out to the upper surface of the insulation layer. Namely, the semiconductor light-emitting device may be a minute semiconductor chip, for example, of 300 μm in size diced from a compound semiconductor wafer being a raw material of a light-emitting diode or a semiconductor laser, or an extremely minute semiconductor of 10 to 100 μm in size selectively crystal-grown on a substrate for growth such as sapphire.

In the Claims:

Claims 1, 6, 7, 12 and 14 have been amended as follows:

1. (Amended) ~~In a~~ A display system comprising:

a plurality of semiconductor light-emitting devices ~~disposed on and fitted to a substrate surface, the improvement wherein:~~ embedded in an insulation layer is formed with said semiconductor light-emitting devices embedded therein and is thinned selectively or non-selectively to expose upper end portions of said semiconductor light-emitting devices, each of said semiconductor light-emitting devices having a lower end surface disposed on a substrate, an exposed upper end portion and a light-emitting region provided between said lower end surface and said upper end portion; and

a conductor film is ~~provided on an upper surface of said insulation layer and in contact with an upper end portion electrode on said exposed upper end portions of said semiconductor light-emitting devices; exposed, and upper end portion electrodes of said semiconductor light-emitting devices are led out to an upper surface of said insulation layer.~~

wherein said light-emitting region is at a slant angle relative to said lower end surface.

6. (Amended) A display system as set forth in claim 1, wherein each said semiconductor light-emitting device has a primary light-emitting direction in the direction from a said light-emitting region toward a lower end surface on said substrate surface, and has a said light-emitting region including includes at least one reflective surface for downward reflection at a portion above said light-emitting region directing light in said primary light-emitting direction.

7. (Amended) A display system as set forth in claim 6, wherein each said semiconductor light-emitting device is formed in a pyramid shape or a truncated pyramid shape, and having at least one slant surface ~~of the surfaces thereof is~~ as said reflective surface.

12. (Amended) A display system as set forth in claim 1, wherein each said semiconductor light-emitting device comprises a first conduction type semiconductor layer, an active layer and a second conduction type semiconductor layer sequentially laminated, said insulation layer is thinned, and said conductor film is formed on a surface formed by said second conduction type semiconductor layer exposed by said thinning ~~and~~ said insulation layer, whereby said upper end portion electrode and said conductor film are formed as one body with each other.

14. (Amended) A display system as set forth in claim 1, wherein each said semiconductor light-emitting device comprises a first conduction type semiconductor layer, an active layer and a second conduction type semiconductor layer sequentially laminated, a contact metal layer of a predetermined thickness is formed on said second conduction type semiconductor layer, said insulation layer is thinned, and said conductor film is formed on a surface formed by said contact metal layer exposed by said thinning ~~and~~ said insulation layer, whereby said upper end portion electrode and said conductor film are formed as one body with each other.